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THE ROSTER.—Messrs. Chapman, Dangar, and Day have been summoned for bench duty on Wednesday.

WATER POLICE COURT.
TODAY.

BEFORE THE Water Police Magistrate, Mr. R. Hunt, and Mr. H. H. V. V.

John Williams, 22, seaman, convicted of stealing a journey ticket, the property of George Hodges, a large shirt belonging to Thomas Dwyer, and a cap, the property of George Fleet, was sent to gaol for three months.

George Barlow, 40, tailor, was also sent to gaol for three months, convicted of stealing a suit, the property of Louis Kesterson.

John Connor was fined 5s, with costs, for drunkenness in a public house.

Ellen Jones and Mary Slater, found guilty of stealing a bottle of juckies, belonging to Frederick Butcher, were each

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spoke at some length on the question of new stars and variable ones. After advertng to the rarity of the former, and stating that Mr. Birmingham in Ireland was the first to perceive, on the 12th May last, the star which appeared in Corona, and which is not a new one, but merely No. 2765 of Argelander's catalogue, and which, being only of the ninth magnitude and hence invisible to the naked eye, suddenly burst forth on that date with considerable splendour. M. Faye states that it attained its maximum brilliancy almost immediately, and that it has now gradually

twinded down again to its original size. M. Parg holds the opinion that the stars hitherto mentioned in this connection, which suddenly increase in brightness owing to some internal process. We beg to illustrate this to our readers by an example. Most geologists imagine (erraneously, we believe) our earth to be a hollow shell enclosing a quantity of mineral matter in a state of igneous fusion, which is being cooled off, but the cooled crust formed on the surface of this fiery liquid. This crust occasionally cracks at some place or other, and some of the liquid (lava) issues forth, as in the case of volcanoes, which, by the way, are not, as is generally supposed, the result of a strong argument in favour of the now-supposed shell of our earth suddenly to burst in consequence of the violent action of the igneous matter, which would then rush out and cover nearly the whole surface. The cracks, or fissures, on which our celestial body, our earth, in the ordinary view, would be visible at all or scarcely so; but this convulsion we have described would at once bring it conspicuously into view by the glare of the fiery fluid. But the latter would gradually cool down in the future.

Ultimately it comes black, and so, to our observer, the earth would soon reappear into its former lustreless state. This is the explanation given by some astronomers to appear and then fade away. Returning to M. Faye's theory, we find that his arguments are in favour of his own view, which is that variable stars, and those which are called new, belong to one and the same class of phenomena. From observations made since 1800, he has found that sixteen variable stars were observed; but since then the heavens have been subjected to such a searching and unremitting exploration that since 1864 no less than 179 new stars have appeared. The same is the case with new stars, three of which have been observed since 1848, while hardly twenty are mentioned in history previous to that time. M. Faye rejects the various explanations attempted by other astronomers, and holds that the cause, as Schwabe has shown, the sun itself is but a variable star, the period of which is eleven years, and the variations of whose brilliancy are owing to the spots which are continually appearing upon its surface. These must also be the cause of the variations of brilliancy which are the characteristic of variable stars. The case of new ones is the same. Formerly only such stars were known as seen with the naked eye; now the instruments used have multiplied the chances are much greater of finding in our catalogue some small star that may suddenly blaze forth in unwonted lustre. Thus, Jansen's star, which appeared in 1806, was again observed in 1830, disappeared in 1821, and reappeared in 1865, is now definitely catalogued as ϵ Cygni, according to Argelander. M. Faye promises to continue the subject at a future occasion.—*London Evening Star*, August 9.

LONDON SWIMMING CLUB.—A large number of persons were attracted to the banks of the Serpentine on the 6th of August, to witness the contests for the silver medals given by the London Swimming Club to their members who had swum the longest distances. The third-class swim first, the specified distance being about 250 yards, and the following started from the Great East Dock.—Messrs. T. Heath, G. H. B. Smith, Wm. C. Smith, John D. Smith, and O. Wesley. Hopkinson took the lead and held it for more than half the distance, when Heath, quite a lad, who had been racing well with Ellison, had him

... and went up to Hopkins. After a time the youngster went away and won easily by two yards in 4 minutes 12 seconds. The winner is a very beautiful swimmer, and will, ere long, give an account of himself in the matches of this and other clubs. We had almost forgotten to mention that the competitors came in as specified above, but Wesley was "very last" indeed. The second class com-

petition was from the usual starting point to 500 yards up towards Kensington Bridge. The starters were Messrs. S. Pratt, F. Smith, S. Bantall, H. Heath and E. Rowley. Heath (an elder brother of the above) was the favourite, being the best swimmer that had won 100 yards, and left Smith to go on, but Pratt soon challenged him and past the first post by a yard. At half the distance he was a yard further in advance, and ultimately won with ease by a good six yards in 8 minutes 49 seconds. Pratt, who is also quite young, was much cheered. Mr. Lacey, the hon. secretary of the London Swimming Club, acted as umpire.

M. Chancourtois presented an interesting memoir on the production of diamonds in nature. M. Chancourtois thinks that diamonds have resulted from an incomplete oxidation of carbides of hydrogen, just as the sulphur of the *solfatare* results from an incomplete oxidation of sulphuretted hydrogen, all of whose hydrogen is converted into water, while only a part of the sulphur is changed into sulphurous acid. It is by a similar process that petroleum has given rise to bitumen, and this again to graphite. "If then," said

SCHOOLS IN ITALY.—The Minister of Education has published the following particulars regarding the seminaries in that kingdom: There are 1,260 seminaries, 1,000 of which are elementary schools. There are 13,174 pupils, 9726 of whom are boarders, and 8429 are dressed in ecclesiastical costume. The Government now proposes to take all the revenues of these establishments into its own hands, and reduce the number of seminaries to 1,000.

Thus, the temperature of the air space and hollow bones of a person, when the contained air is raised to the temperature of the bird's body, is less than a gram weight a fact which proves the bird's sustained flight. The air space in the lungs is sustained by the air sacs connected with the lungs are supposed to be for the purpose of keeping up a constant current of air over the capillaries of the lungs. The lungs contract and expand in alternation with the lungs, that is, they expand when the lungs contract, &c.

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BULLOCKS AND HORSES—**W. J. SHEPHERD**, 1001 Broadway, New York City, has a large stock of **BULLOCKS** and **HORSES** in **Cleveland** and **Myrtle** streets, now opened, at reduced prices and liberal terms. **SHEPHERD** and **CO.**, Darling Nursery, opposite University.

PRELIMINARY NOTICE—The magnificent park of "Retreat" and "Bollingbrook," in the Leitchfield District, with 4500 head of cattle, will shortly be offered to public competition, if not previously disposed of by private contract. Full particulars will be given in future advertisements. Apply to **COENISH** and **HARRIS**, Sydney, October 24th.

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BANK OF NEW SOUTH WALES v. MOON.
ON MONDAY, the 19th November inst. at noon, at Mr. P. R. Holdsworth's Shire Woolloomooloo Bay, Sydney, unless this writ is previously satisfied, the **SHEEP** will cause to be sold by public auction.

